

**Amendments to the Claims:**

1. (Currently amended) A cable modem for connecting Customer Premises Equipment (CPE) comprising

a Media Access Control (MAC) layer controller;

a Logical Link Control (LLC) bridge interacting with the MAC layer controller;

an IP stack processing IP frames and interacting with the LLC bridge;

Customer Premises Equipment (CPE) interfaces, each interface linked to one device of Customer Premises Equipment; and

a multiplexer of Customer Premises Equipment (CPE) interfaces linked to the CPE interfaces and to the LLC bridge wherein the multiplexer has

a table of the CPE interfaces linked to the multiplexer with data related to the CPE interfaces, the data being used by an identification function to determine an addressed interface chosen from the CPE interfaces, to which a frame with a specific receiver physical address is directed, and

a table with MAC addresses of devices of the CPE and identifiers of the CPE interfaces to which of the devices of the CPE are linked, where an interface identifier, to which device of the CPE with a specific MAC address is connected, is determined by a check-and-associate function, and records to the table with MAC addresses are added using an adding function, which analyses commands sent by the interfaces

wherein the multiplexer enables transfer of data between the LLC bridge and one of the CPE interfaces and wherein each of the CPE interfaces is an interface of a virtual CPE being an application and operates dependent on received frames and controls flow of data between the multiplexer and the application.

2. (Canceled)

3. (Canceled)

4. (Original) The cable modem according to claim 1, wherein the table of the CPE interfaces comprises a name of the device of the CPE, an ID number of the device of the CPE and a MAC address of the device of the CPE.

5. (Currently amended) A method for controlling flow of data between a cable modem and Customer Premises Equipment (CPE) CPE linked to the cable modem equipped with an LLC bridge and a multiplexer of CPE interfaces having an input buffer and an output buffer comprising

providing the multiplexer of CPE interfaces with a table of interfaces comprising data enabling identification of the interfaces by MAC address; and  
using the table data of CPE interfaces by an identifying function to determine the an interface identifier of each CPE interface, to which a frame with a specific receiver MAC address is to be transmitted via a sending function;

controlling the input buffer by creating a list of recipient CPE interfaces to which

the frame is directed;

informing the recipient CPE interfaces about the frame in the input buffer;  
increasing by one a counter of informed recipient CPE interfaces for each  
informed recipient CPE interfaces;

increasing by one a counter of received frames when recipient CPE interfaces  
receive the frame from the buffer; and

determining that the frame is received by all recipient CPE interfaces when the  
counter of received frames reaches the counter of informed recipient CPE interfaces.

6. (Currently amended) The method for controlling flow of data according to claim 5  
further comprising

transmitting outgoing data from the cable modem through the CPE interface to ~~an~~  
the output buffer;

checking if the outgoing data is also directed to another CPE interface;  
reserving the input buffer;  
sending the outgoing data to ~~a previously reserved~~ the input buffer when the  
outgoing data is directed to another CPE interface

canceling ~~the~~ reservation of the input buffer when the outgoing data is received  
from the input buffer by all ~~recipients~~ CPE interfaces, to which it was directed; and

sending information to the LLC bridge about a frame ~~the outgoing data in~~ in ~~the~~  
output buffer directed to the LLC bridge.

7. (Currently amended) The method for controlling flow of data according to claim 5

further comprising

reserving the input buffer;

transmitting ~~the~~ incoming data through the LLC bridge to ~~a previously reserved~~  
the input buffer; and

canceling ~~the~~ reservation of the ~~previously reserved~~ input buffer when the  
incoming data is received ~~form~~ from the input buffer by all ~~recipients~~ interfaces, to which  
it was directed.

8. (Canceled)